

## Cedar Creek Lake Bass Assessment 2011

Cedar Creek Lake, a 792-acre lake located 5 miles southeast of Stanford in Lincoln County, has an average depth of 22 feet and maximum depth of 60 feet. The lake was impounded in 2002, and was a cooperative effort between the Kentucky Department of Fish and Wildlife Resources (KDFWR), the Kentucky Transportation Cabinet, and the Lincoln County Fiscal Court. The watershed occupies 14,000 acres, and is primarily agriculture, with 45% consisting of pastureland, 35% woodland, and 19% cropland. A 300-ft buffer zone surrounds the lake and prevents development around the lake. The lake is fertile (eutrophic) and is typically thermally stratified between May and November. By mid-summer, the thermocline occurs at about 15 ft, and little oxygen remains below that depth. Much of the littoral zone of the lake is covered with aquatic vegetation (primarily naiads, coontail, and muskgrass) during summer and early fall.

The primary purpose for the impoundment of Cedar Creek Lake was to provide recreational opportunities (angling and boating) for the public. The lake was developed with anglers in mind and extensive habitat structures were placed in the lake basin prior to impoundment. Also, much of the standing timber was left in the lake to provide additional fish habitat.

Several year classes of largemouth bass were stocked in the lake upon impoundment to provide immediate angling opportunities. Cedar Creek Lake is the only lake in the state managed as a trophy bass fishery (20-inch size limit, 1 fish creel limit). The trophy regulation was implemented upon impoundment (2002), and has been well received by anglers. Currently, no immediate plans to modify the regulation are anticipated.



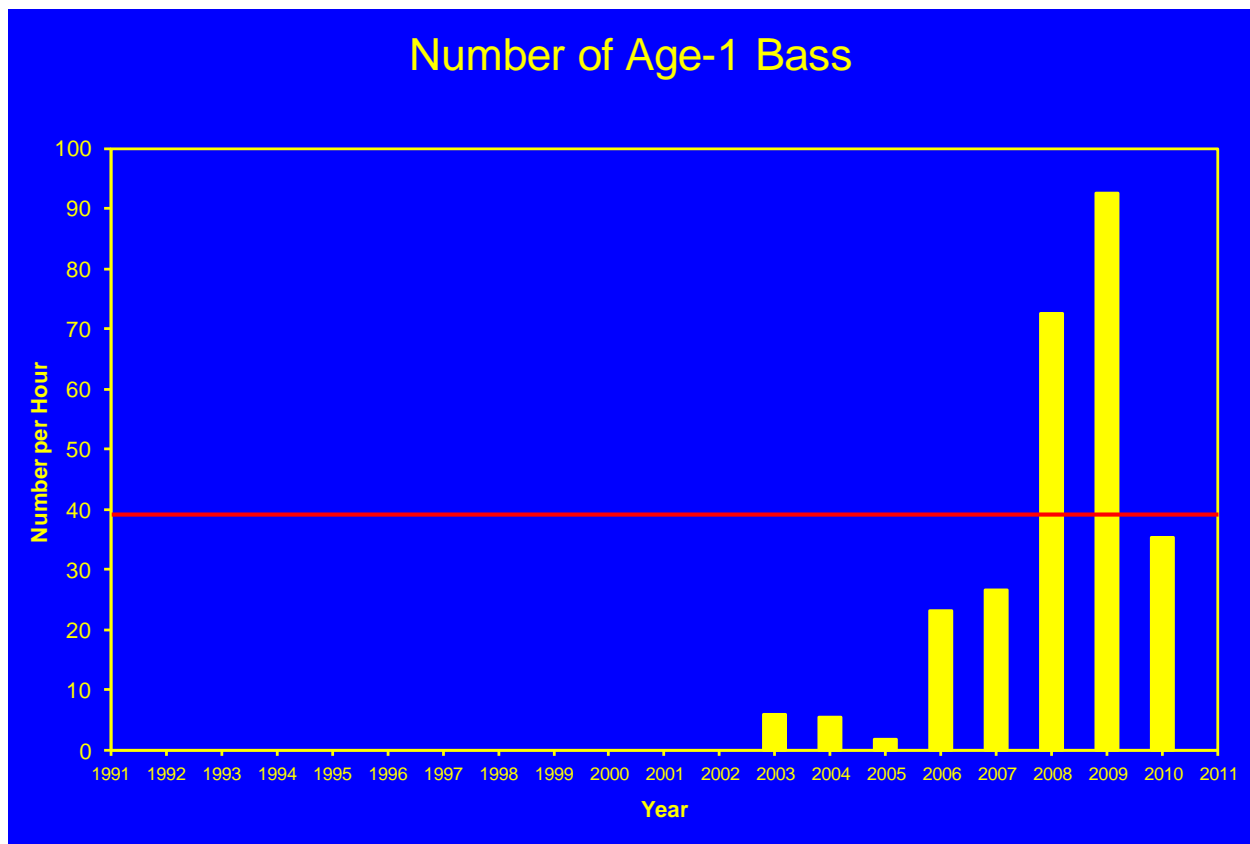
## Parameter 1 – Length at age-3 (growth rate)

At Cedar Creek Lake, the length of an age-3 largemouth bass averaged 13.2 inches (represented by the red line). Initial growth rates were influenced by stocked bass, which were raised under ideal growth conditions at the hatchery. Although naturally reproduced bass exhibited slightly slower growth rates than hatchery-raised fish, growth rates of bass at Cedar Creek Lake are excellent when compared to other lakes in the state. Growth rates will be monitored periodically to evaluate any changes in growth.



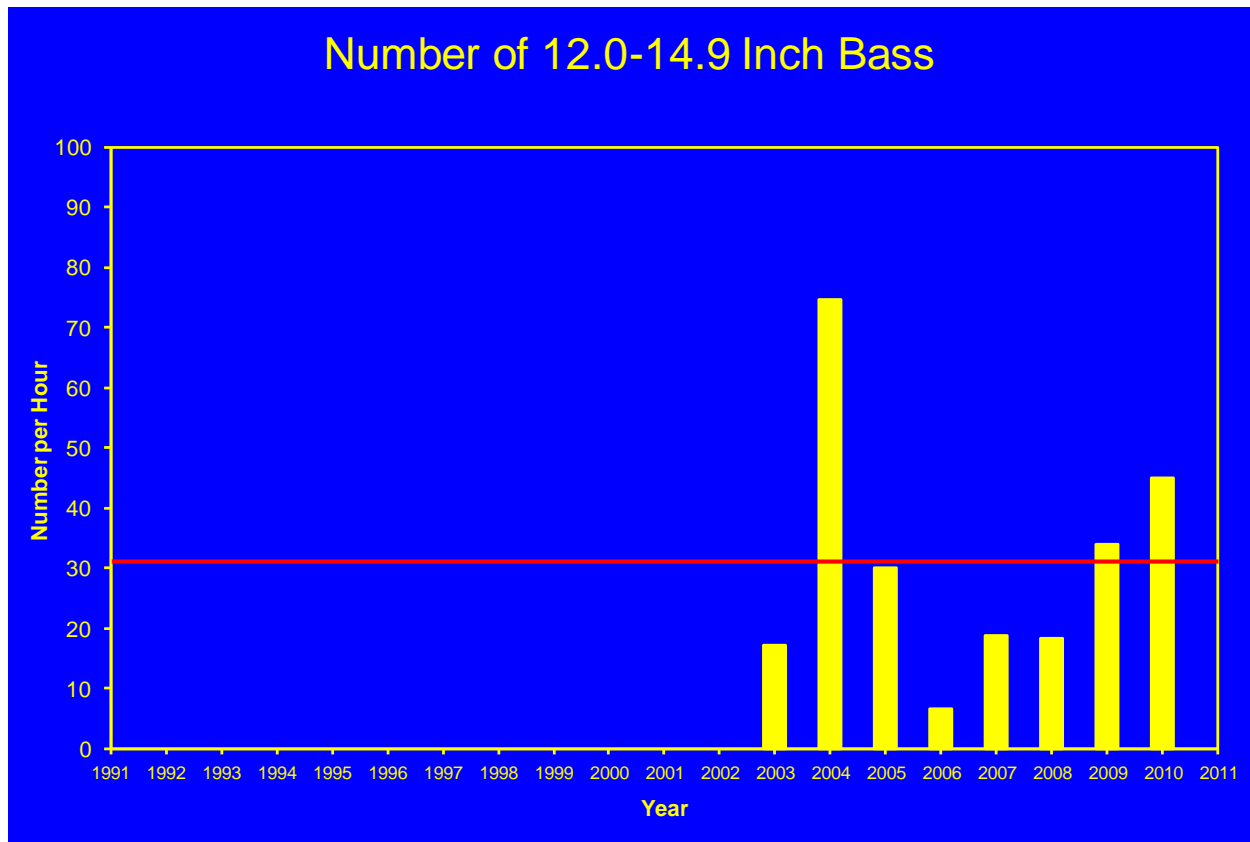
## Parameter 2 – Numbers of age-1 bass (how good the spawn was)

KDFWR looks at the spring electrofishing catch rates of age-1 largemouth bass to assess the success of the spawn that occurred in the prior year. For example, the age-1 catch rate in 2004 would represent the 2003 year-class. This is an important parameter because the number of age-1 bass produced represents how good the fishing will be once these fish grow large enough for anglers to catch. At Cedar Creek Lake, age-1 largemouth bass catch rates have averaged 32.9 fish per hour of electrofishing. When compared to other lakes of this size, the average catch rate of age-1 bass in Cedar Creek is fair.



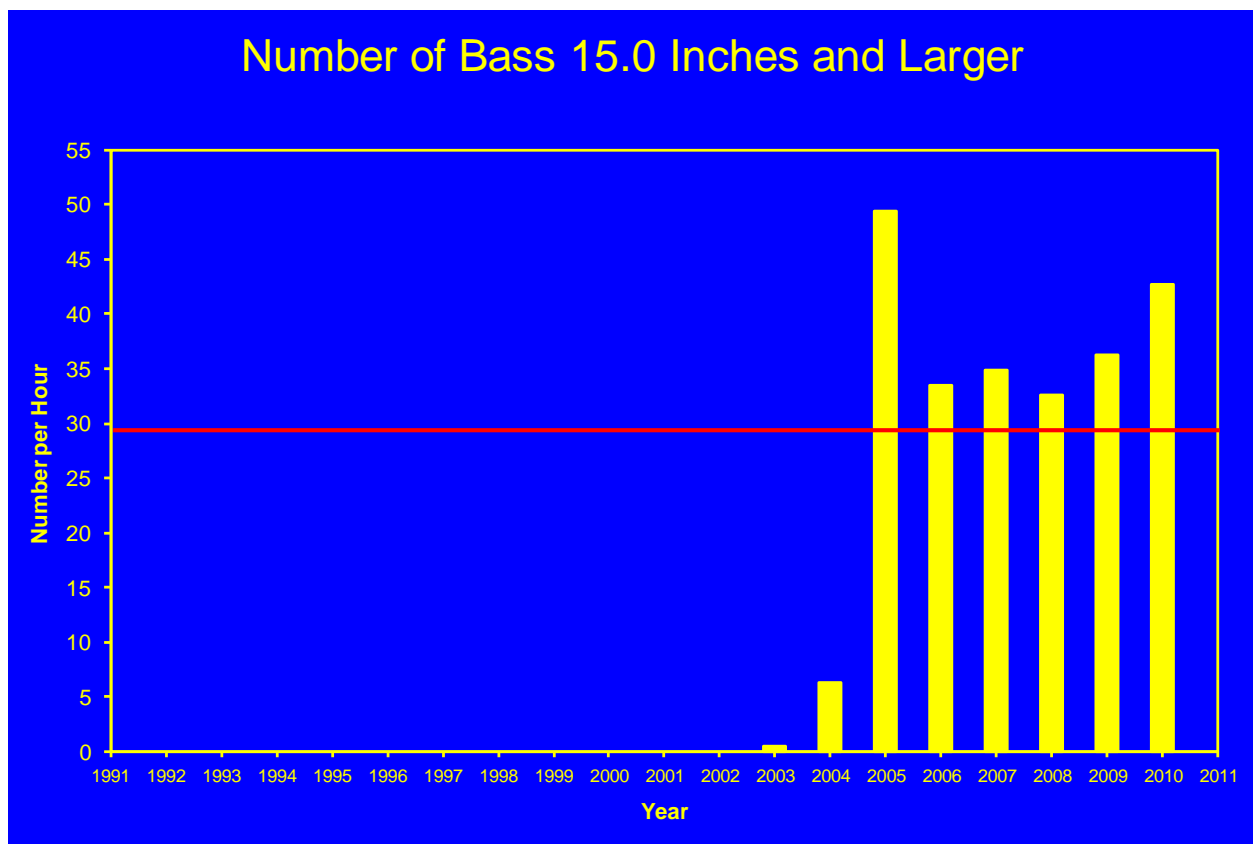
### Parameter 3 – Numbers of 12.0-14.9 inch bass

The electrofishing catch rate of 12.0-14.9 inch largemouth bass has averaged 30.6 fish/hour over the years at Cedar Creek Lake, which is considered fair for lakes of its size. The high catch rate observed in 2004 was comprised of hatchery-raised bass. The upward trend in the population since 2006 represents naturally reproduced bass attaining those sizes.



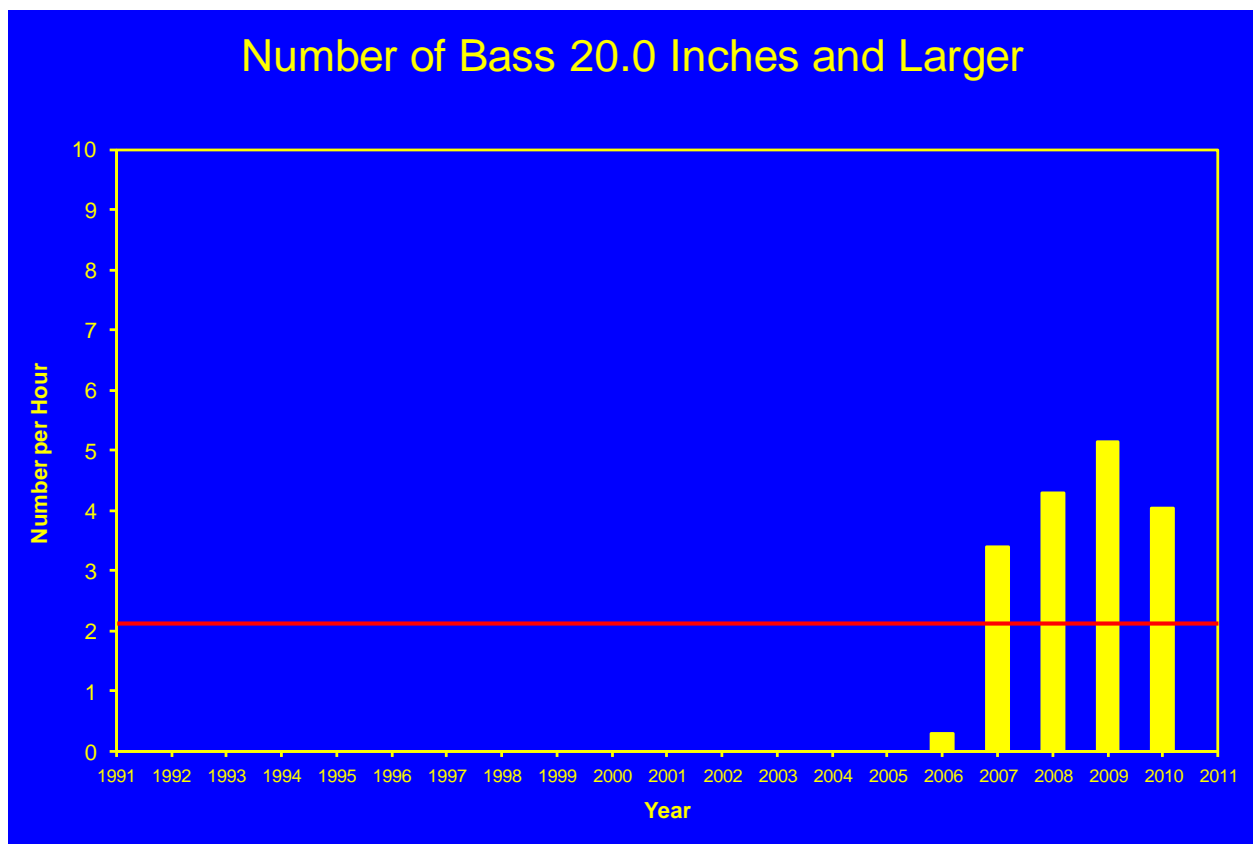
## Parameter 4 – Numbers of 15.0 inch and larger bass

The catch rate of 15.0 inch and larger largemouth bass at Cedar Creek Lake has averaged 29.5 fish/hour of electrofishing and has remained steady in the last several years. The dramatic increase in the catch rate from 2004 to 2005 is the result of the initially stocked bass attaining 15 inches. The high catch rates bode well for the future, as anglers should be able to enjoy good fishing for quality largemouth for the next several years.



## Parameter 5 – Numbers of 20.0 inch and larger bass

The electrofishing catch of 20.0-inch and larger largemouth bass has averaged about 2.1 fish/hour for Cedar Creek Lake. Several year classes have recruited into the 20-inch size class, and we expect anglers to be able to catch large bass in future years.



### Overall – Total Assessment Score (All five parameters added together)

Overall, the largemouth bass fishery at Cedar Creek Lake has averaged a good rating (13.2), increasing annually since impoundment through 2009. The steady improvement in the rating is a culmination of several factors, including good growth, good recruitment, and low mortality. We expect Cedar Creek Lake to remain one of the premier largemouth bass lakes in the state.

